

PAVITHRA PAGADALA

☎ +91 7729913860 | ✉ pavithrapagadala27@gmail.com |

Palamaneru, Andrapradesh – 517432

PROFESSIONAL SUMMARY:

- Embedded Software Engineer with 1.3 years of experience in developing applications on ARM Cortex-M4 platforms (STM32, NRF52) using Embedded C and STM32 HAL API. Skilled in peripheral integration, debugging with tools like STM32CubeIDE, Putty, Real Term, and hardware debuggers. Strong understanding of schematics and hands-on experience with soldering, oscilloscopes, and logic analyzers.

TECHNICAL SKILL SET

- **Microprocessor:** ARM Cortex-M4
- **Microcontrollers:** STM32WLE5JC, NRF52840
- **Operating Systems:** Windows.
- **Peripherals:** GPIO, ADC, Timers, PWM, UART, USART, I2C, SPI.
- **Languages:** Embedded C, C language.
- **Development:** HAL API
- **Tools:** GitHub, SVN, STM32CubeIDE, KILE, Code beamer
- **Serial Communication tools:** Putty, Real Term, Tera Term.
- **Debuggers:** ST-link debugger, j-link debugger.
- **Hardware & Tools**
 - Soldering (SMD, through-hole).
 - Logic Analyzers, Oscilloscopes, function generator, Multimeter.
 - PCB Design Review and Schematic Interpretation.
- **Hardware Understanding:** Schematics, Datasheets, Reference Manuals

EDUCATION

- **B Tech in Electronics and Communication Engineering**
Mother Teresa institute of engineering and technology | JUN 2022 | 76%
- **Diploma in Electronics and communication Engineering**
Govt. Polytechnic for women Palamaner | Apr 2019 | 86%
- **Secondary School Certificate (class X)**
Govt.Heigh School Nellipatla | Mar 2016 | CGPA 8.8/10

PROFESSIONAL EXPERIENCE

Embedded software Engineer

Minebea Intec Pvt Ltd, Bengaluru

August 2022 – December 2023

Name of Project: SMART VALVE

A **wireless smart valve** that automatically regulates room temperature by adjusting a valve actuator based on sensed environmental data. The system uses **LoRa** radio on an STM32WLE5JC MCU for long-range, low-power communication, enabling deployment in large buildings or remote sites without Wi-Fi coverage.

Responsibilities:

Utilized GPIOs for digital outputs to enable/disable the valve driver and read end-stop switch states, with interrupt-driven inputs for manual-override push-buttons

- Configured ADC to continuously monitor battery voltage, motor current for safety/shutdown logic, and temperature measurements
- Implemented UART at 115200 baud for debug logging and Over-The-Air (OTA) transmission and reception of temperature data
- Employed J-Link and ST-Link debuggers for firmware flashing, breakpoints, and real-time variable inspection
- Used logic analyzer and oscilloscope to validate PWM waveforms, ensure smooth motor transitions without stalling, and verify wake-up sequences
- Leveraged the NRF Power Profiler Kit to measure active and sleep currents, optimizing wake/sleep intervals for ultra-low-power operation
- Configured Timer 1 in PWM mode to drive the valve motor at adjustable speeds with fine granularity, produce precise delays, and used the watchdog timer for system resets
- Connected the LoRa gateway to The Things Network and ensured reliable temperature data transmission
- Managed source-code collaboration and pull-request reviews using SVN.
- Tracked documentation, feature requests, bug reports, and test cases in Code beamer to maintain project transparency and quality

DECLARATION

I hereby declare that the above information is true to the best of my knowledge and I am committed to working sincerely and fulfilling organizational expectations.

P. Pavithra.